REMARKS

Applicants have carefully considered the July 7, 2006 Office Action, and the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-13 were pending in this application. In response to the Office Action dated July 7, 2006, claims 1 and 4 have been amended, claims 2-3 have been cancelled and new claims 14-15 have been added. No new matter has been entered. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification, including page 13, lines 6-15 and page 50, line 25. Entry of the present response is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Claims 1 and 6-8 were rejected under 35 U.S.C. § 103(a) as being obvious over Newmoyer (U.S. Pat. No. 5,814,406, hereinafter "Newmoyer"). During a personal telephone interview with Examiner Tran on September 20, 2006, the Examiner confirmed that the statement of the rejection on page 2 of the Office action, inadvertently rejected claims 1 and 6-8 under 35 U.S.C. § 102(b) rather than 35 U.S.C. § 103. Applicants respectfully traverse the rejection under 35 U.S.C. § 103.

Applicants respectfully submit that Newmoyer is directed to an electrical wire for transmitting electrical signals by the conductor (Figure 1) and, therefore, completely unrelated to the present claimed subject matter, namely optical fibers. The present claimed invention is directed to optical fibers for transmitting optical signal by the glass, the electrical wiring of

Newmoyer is used for transmitting electrical signals by the conductor. Fig. 1 of the present invention discloses that the glass fiber 11 is present in the center and claim 1 recites coating layers around the glass fiber. The present claimed optical fiber and the electrical wire of the applied reference are not only different from one another in terms of material, but also in the signal to be transmitted. As discussed below, the property which is required for the coating layer is different between the present invention and Newmoyer.

Applicants submit that when a resin is coated around glass, it is shrunk due to the application of heat and, thus, lateral pressure is applied to the glass and the double reflection index of the glass changes. With this change in reflection index, the loss of light transmitting within the glass increases. The present invention has evaluated this loss and reproduced the results in Table 1 (Optical Transmission Loss Characteristics, Temperature Change Resistance Property) of the present specification. Optical fibers are required to have good transmission loss and temperature change characteristics. That is, the lateral pressure applied to the glass by the coating resin should be adjusted, and in view of this aspect, a resin suitable for optical fibers should be selected. Indeed, as described on page 26, lines 9-16 of the specification, when conventional buffered optical fiber undergoes abrupt changes in temperature, uneven stress is applied to the glass fiber. Thus, the glass fiber is easily distorted. The amount of transmission loss variation at the heat cycle test is large. Consequently, in the case of the conventional buffered optical fiber, the transmission loss due to the change in temperature increases.

The Examiner's attention is directed to page 28, line 2 through page 29, line 8 of the present specification, wherein a resin used for coating of an electric wire cannot be used for the coating resin of the optical fiber without modification. This section of the specification is reproduced below for the Examiner's convenience:

> Incidentally, the device according to prior art 2 is a cable (or electric wire) adapted so that the flame retardant material (no nitrogen-based flame retardant material is intended) is added to at least the outer surface and the overall sheath of the insulator covering the conductor. Patent document 2 describes a material for the insulator according to prior art 2, which comprises polyphenylene oxide, low-density polyethylene and SEBS as resin components. Even in the case of such an electric cable, an end surface of the conductor may protrude from the end surface of the insulator (this phenomenon is sometimes referred to as "protrusion"). However, even when the "protrusion" occurs, for example, in the case that such a cable is connected to another communication member at its end surface, a conduction failure is not actualized. However, when the "protrusion" occurs in the case that the buffered optical fiber is connected to another communication member at its end surface, unintended stress is applied to the glass fiber, so that the optical transmission characteristics are degraded, and that the glass fiber is broken in the worst case.
>
> Therefore, even when the insulator according to prior art 2 is applied to the buffered optical fiber according to prior art 1, the insulator according to prior art 2 differs from the insulator of the buffered optical fiber according to the embodiment of the invention, in that the former insulator comprises no nitrogen-based flame retardant material. Thus, the buffered optical fiber according to the embodiment of the invention is not obtained from the prior art. Additionally, it is not ordinarily considered by those skilled in the art that the insulator according to prior art 2, which causes the problem of the "protrusion" of the optical fiber, is applied to the buffered optical fiber according to the embodiment of the invention.

Thus, contrary to the Examiner's assertion, Newmoyer's coating for electrical wiring is not suitable for optical fibers.

Furthermore, the present claimed invention is directed to, in part, providing a buffered optical fiber which does not pollute its environmental system, has flame retardancy and excellent optical transmission (pages 2-3 of Applicants' disclosure). In contrast, Newmoyer describes a electrical wiring used in a plenum (compartment or chamber to which air ducts are connected and which forms part of an air distribution system). See Cols. 1-2 of Newmoyer. Newmoyer is <u>not</u> reasonably pertinent to optical transmission or the problems associated therewith.

It is well settled that the problem addressed and solved by a claimed invention must be given consideration in resolving the ultimate legal conclusion of obviousness under 35 U.S.C. §

103. *North American Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 15 USPQ2d 1321 (Fed. Cir. 1990); *In re Nomiya*, 509 F.2d 566, 184 USPQ 607 (CCPA 1975). Newmoyer fails to express any recognition of the problem much less offer any viable solution thereof. Under such circumstances, the problem addressed and solved by the claimed invention constitutes a potent indicium of nonobviousness which must be given consideration regarding the ultimate legal conclusion of nonobviousness under 35 U.S.C. § 103.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection.

Dependent claims 2-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Newmoyer in view of Ono et al. (U.S. Pat. App. Pub. No. 2003/0158309, hereinafter "Ono"). Applicants respectfully traverse.

Applicants incorporate herein the arguments previously advanced in traversal of the rejection of claims 1 and 6-8 under 35 U.S.C. § 103(a) predicated upon Newmoyer. The secondary reference to Ono does not cure the argued deficiencies of Newmoyer. Ono is directed to aromatic polycarbonate resin compositions. Ono is silent as to using its aromatic polycarbonate resin compositions for coating optical fibers. The hard resin of Ono is used for exterior and interior parts for OA equipment and home electric appliances and it is hard. However, a buffered optical fiber of the present invention is not rigid. It is wired by being bent -- gently. The polycarbonate resin of Ono is not suitable for the buffered optical fiber of the present invention.

Thus, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that the requisite realistic motivation has been established, the claimed

invention will not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Reconsideration and withdrawal of the rejection are solicited.

Dependent claims 5 and 9-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Newmoyer. Applicants respectfully traverse. Applicants incorporate herein the arguments previously advanced in traversal of the rejection of claims 1 and 6-8 under 35 U.S.C. § 103(a) predicated upon Newmoyer. Dependent claims 5 and 9-12 are free from the applied art in view of their dependency from claim 1. Accordingly, the rejection is not legally viable and should be withdrawn.

Independent claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Newmoyer in view of Caveney (U.S. Pat. App. Pub. No. 2003/0128938, hereinafter "Caveney"). Applicants respectfully traverse.

Applicants incorporate herein the arguments previously advanced in traversal of the rejection of claims 1 and 6-8 under 35 U.S.C. § 103(a) predicated upon Newmoyer. Independent claim 13 is free from the applied art for substantially the same reasons as independent claim 1. Moreover, the secondary reference to Caveney does not cure the argued deficiencies of Newmoyer. Caveney is directed to an optical fiber connector. Caveney does not disclose or remotely suggest a buffered optical fiber of the present claimer subject matter.

Thus, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that the requisite realistic motivation has been established, the claimed invention will not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp. supra.* Reconsideration and withdrawal of the rejection are solicited.

Newly added dependent claim 14 is patentable over the art of record for the following reasons. Claim 14 recites that the second resin composition does not contain phosphorus.

Support for the subject matter of claim 14 is found at page 50, line 25 of the specification. Newmoyer, at col. 6, line 46, describes additives including "Nitrogen-phosphate" and thus, Newmoyer discloses phosphate additives in its resin compositions. The Examiner's attention is directed to page 13, lines 6-15 of the specification wherein the significance of a phosphorous-free second resin is explained.

New independent claim 15, is similar to independent claim 1, however, the second resin composition includes, as the base polymer, one of components selected from a polystyrene-based elastomer **or** a mixture of polystyrene-based elastomer and polyphenylene ether polymer. As described in examples of the present specification, the second resin composition is made with a polystyrene-based elastomer. In order provide the flexibility as fiber, the second resin is made with a polystyrene-based elastomer (i.e., block copolymerization of polystyrene). An elastomer is not equivalent to polystyrene-based polymers of Ono.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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